

REMARKS

Claims 44, 45, 51-54, 56, 58-60 and 66-68 remain in the application. Reconsideration of the application in view of the remarks to follow is requested.

The Office Action is silent with respect to the status of the drawings. Substitute drawings, red-lined drawings and a substitute drawing request form were tendered together with the last response (June 12, 2000), along with a request for consideration of same. Applicants again request the status of the revised drawings.

Claims 44, 45, 51-54, 56, 58-60 and 66-68 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter that is not enabled by the specification, and also stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

The Examiner's position, insofar as understood, is that the claims are not enabling for processes that may be developed after the filing date of the application. However, applicants are not required to provide an application that is enabling for dates after the filing date of the application, for the simple reason that to attempt to do so is absurd.

Applicants note the requirements of MPEP §2164.05 (a), entitled "Specification Must Be Enabling As Of The Filing Date". This MPEP section specifically states that "The state of the art at the filing date of the application is used to determine whether a particular disclosure is enabling as of the filing date". Publications dated after

the filing date providing information publicly first disclosed after the filing date generally cannot be used to show what was known at the time of filing." In effect, the Examiner is improperly using a hypothetical publication to show that there will be progress in the lithographic arts after the filing date of the application to reject the claims.

This MPEP section also states that "The state of the prior art provides evidence of the degree of predictability in the art and is related to the amount of direction or guidance needed in the specification as filed to meet the enablement requirement." Applicants have previously pointed out that some aspects of the lithography arts are extremely predictable to those of skill in the art.

Specifically, a minimum photolithographic feature size does characterize all lithography processes now known and will characterize all lithography processes that will be developed. Applicants have extensively demonstrated, using tools available to the Examiner, that this terminology is regularly and routinely used in the relevant arts and is understood by those of skill in the art.

Applicants further note the requirements of MPEP §2164.08, entitled "Enablement Commensurate In Scope With The Claims". This MPEP section quotes *In re Goffe*, 542 F.2d 564, 567, 191 USPQ 429, 431 (CCPA 1976), where the court states that "[T]o provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he

has found ~~will~~ work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purposes of promoting progress in the useful arts." Accordingly, the Examiner's position fails to conform to the law, which the Examiner is, contrary to her stated position, obligated to follow via the principle of stare decisis. Moreover, by taking a position that is contrary to law, the Examiner is improperly depriving Applicants of a constitutionally-granted property right.

The Examiner has stated (p. 3, Office Action dated March 15, 2000) that "the specification does not even teach a process that produces features dimensions less than [sic] all photolithographic processes known today." Why is this relevant? Applicants are not claiming a lithographic process, much less all lithographic processes. Applicants are claiming the subject matter recited in the claims.

The Examiner states that "minimum lithographic feature dimension" is indefinite. If that were so, why would this language be employed so widely in the lithographic arts? This language is clear, is well understood and is widely used by those familiar with the relevant arts. The Examiner states that the term "photolithographic process" is not clear, because one cannot determine what wavelength the photons are that are being used in the process. Again, what relevance does this have to the claimed subject matter? The term "photolithographic process" is abundantly

clear, and again, is well and widely understood by those of skill in the arts. Applicants believe that the pending claims are fully compliant with all requirements of 35 U.S.C. 112. The techniques developed by Applicants are described with sufficient clarity that any person of ordinary skill in the art is enabled to practice the present invention, irrespective of the lithographic technique that is employed. Further, the terms with which the invention is described and claimed are definite. For at least these reasons, the rejections under 35 U.S.C. §112 should be withdrawn, and claims 44, 45, 51-54, 56, 58-60 and 66-68 should be allowed.

Claim 44 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Morihara et al. in view of Wolf et al. Claims 44, 45, 51-54, 56, 58-60 and 66-68 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lee, U.S. Patent No. 5,684,316 in view of Morihara et al. and Wolf et al.

Claim 44 recites "each lower plate including a polysilicon plug having a diameter less than the minimum photolithographic feature dimension" which is not taught, disclosed, suggested or motivated by the cited references, alone or in any proper combination.

Simply stating a conclusion that "it would have been obvious" to combine teachings from references does not meet the standards for a rejection under 35 U.S.C. §103(a) as set forth in The Manual of Patent Examination Procedure at §706.02(j) entitled "Contents of a 35 U.S.C. 103 Rejection." This MPEP section states that three

basic criteria must be met in order to establish a prima facie case of obviousness.

The first of these is that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. The Office Action fails to show that the subject matter of claim 44 is suggested or motivated by the teachings of the references.

The second requirement of MPEP §706.02(j) is that there must be a reasonable expectation of success. The third requirement is that the prior art reference (or references when combined) must teach or suggest all of the claim limitations.

Since all of the cited references are silent with respect to any polysilicon plug having a diameter less than the minimum photolithographic feature dimension, combining their teachings cannot possibly provide the invention as recited in claim 44.

Further, because the references are silent with respect to polysilicon plugs having a diameter less than the minimum photolithographic feature dimension, there can be no reasonable expectation of success in arriving at the claimed subject matter from combining their teachings. For at least these reasons, the rejection of claim 44 should be withdrawn, and claim 44 should be allowed.

Claim 45 recites "the adjacent stacked capacitors respectively including a lower plate having a minimum lateral spacing from one

another which is less than the minimum photolithographic feature dimension wherein each of the pair of capacitors comprises: a polysilicon plug having a diameter less than the minimum photolithographic feature dimension; and in cross-section, at least two laterally opposed fins interconnected with and projecting laterally from the plug”, which is not taught, disclosed, suggested or motivated by the cited references, alone or in any proper combination. As noted above, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The proposed combination fails to teach or suggest all of the claim limitations. For at least these reasons, the rejection of claim 45 should be withdrawn, and claim 45 should be allowed.

Claim 54 recites “the adjacent stacked capacitors respectively including a lower plate having a minimum lateral spacing from one another which is less than the minimum photolithographic feature dimension, each lower plate comprising a polysilicon plug having a diameter that is less than the minimum photolithographic feature dimension and, in cross-section, at least two laterally opposed fins interconnected with and projecting laterally from the plug”, which is not taught, disclosed, suggested or motivated by the cited references. For at least these reasons, the rejection of claim 54 should be withdrawn, and claim 54 should be allowed.

Claim 62 recites that “each finned lower plate comprises: a polysilicon plug; and in cross-section, at least two laterally opposed

fins interconnected with and projecting laterally from the plug, the plug having a minimum width which is less than the minimum photolithographic feature dimension", which is not taught, disclosed, suggested or motivated by the cited references. For at least these reasons, the rejection of claim 62 should be withdrawn, and claim 62 should be allowed.

Further, no evidence has been provided as to why it would be obvious to combine the teachings of any of these references. Evidence of a suggestion to combine may flow from the prior art references themselves, from the knowledge of one skilled in the art, or from the nature of the problem to be solved. However, this range of sources does not diminish the requirement for actual evidence. Further, the showing must be clear and particular. See *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999).

Applicants also note MPEP §2145, entitled "Consideration of Applicant's Rebuttal Arguments". This MPEP section states, in subsection B, entitled "Obvious To Try Rationale", that "An applicant may argue the examiner is applying an improper "obvious to try" rationale in support of an obviousness rejection.

The admonition that 'obvious to try' is not the standard under Section 103 has been directed mainly at two kinds of error. In some cases, what would have been 'obvious to try' would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave

either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful.

In others, what was 'obvious to try' was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it." *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988) (citations omitted) (The court held the claimed method would have been obvious over the prior art relied upon because one reference contained a detailed enabling methodology, a suggestion to modify the prior art to produce the claimed invention, and evidence suggesting the modification would be successful.). See the cases cited in *O'Farrell* for examples of decisions where the court discussed an improper "obvious to try" approach. See also *In re Eli Lilly & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) and *In re Ball Corp.*, 925 F.2d 1480, 18 USPQ2d 1491 (Fed. Cir. 1991) (unpublished) for examples of cases where appellants argued that an improper "obvious to try" standard was applied, but the court found that there was proper motivation to modify the references."

In the instant case, the Examiner offers (p. 5) the notion that "it would have been obvious in view of the art cited to make semiconductor structures smaller in order to fit more devices on a chip." This is wide of the mark of demonstrating obviousness,

because the Examiner has failed to show any guidance whatsoever in the references that would lead one to the claimed structures.

Dependent claims 51-53, 56, 58-60 and 66-68 are allowable as depending from an allowable base claims and for their own recited features which are neither shown nor suggested by the prior art.

In view of the foregoing, allowance of claims 44, 45, 51-54, 56, 58-60 and 66-68 is requested. The Examiner is requested to phone the undersigned in the event that the next Office Action is one other than a Notice of Allowance. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,

Dated: Nov. 29, 2000

By: _____



Frederick M. Fliegel, Ph.D.
Reg. No. 36,138